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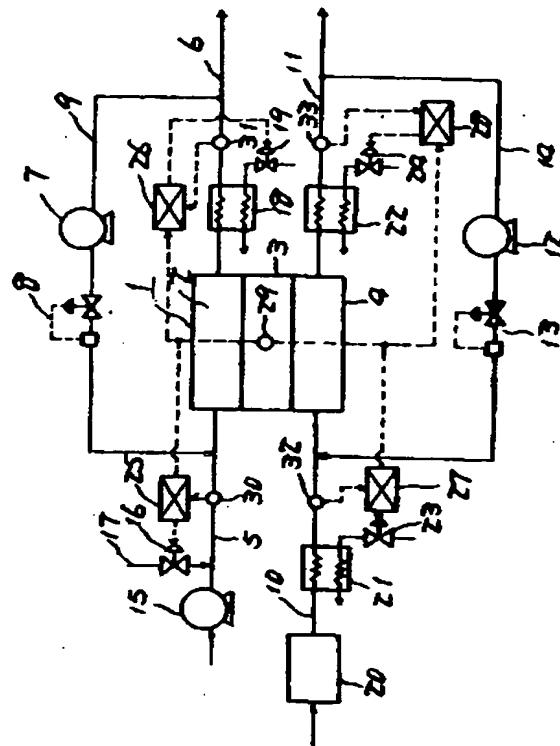
APPLICATION DATE : 24-06-83
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**TITLE : FUEL CELL POWER GENERATION
SYSTEM**



ABSTRACT : PURPOSE: To quickly and accurately optimize humidity of a fuel cell power generation system by installing a controller by which vapor pressure of oxidizing agent and fuel is made equal to that of electrolyte in recycle lines of fuel and oxidizing agent.

CONSTITUTION: An oxidizing agent side recycle line 9 and fuel side recycle line 14 which are installed in a fuel cell main body 1 are made to branch from the points passing through condensers 18 and 22 in the outlet of the fuel cell, and thereby, vapor partial pressure of a fuel supply line 10 and an oxidizing agent supply line 5 is controlled. A signal from a temperature measuring point 29 of the fuel cell 1 and signals from humidity measuring devices 30, 31, 32 and 33 are outputted to a computing elements 25, 26, 27 and 28. After calculation, control signals are outputted to valves 16, 19, 23 and 24 to control refrigerant flow rate of each condenser 18, 21 and 22. By this control, humidity of fuel and oxidizing agent which are supplied to the fuel cell is optimized.

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